3: Mariner F-5 (1806-1810) 1818
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463 462 Thus far with those arts that are strictly professional, and are practised by men; there are some others not professional, which are also exercised by men, viz. surgical operations, erecting fortifications, rope-making, and making bows and arrows, clubs and spears: the first has been treated of in Chap. 21, and for the second, see Vol. I. p. 90.

ROPE-MAKING. There are two kinds of rope, 283 one made of the husk of the cocoa-nut, which is the superior sort, and the other of the inner bark of the *fow*. Although these ropes are made entirely by hand, yet even those of considerable circumference are laid with the greatest regularity: they are very elastic, and the strength of them is universally known. The husk of the cocoa-nut is first made into plait, which is then twisted into strands, and of these the rope is made. The bark of the *fow* is not first made into plait, but at once into strands.

BOWS AND ARROWS. The bows are generally 719 made of the wood of the mangrove, though [283] some few of the casuarina wood: the string is made of the inner bark of a tree they call *olon-* [287] *gá*, and is exceedingly strong. The arrows are made of reed, headed with casuarina wood: some of these heads have three or four rows of barbs, and, to make them more formidable, are

3: Mariner F-5 (1806-1810) 1818
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285 of the nut, and have rather the appearance of
415 wicker-work: the latter are sometimes variously
[53] stained and ornamented with beads or shells
[462] worked in. The larger and coarser baskets are generally made by men, to hold axes and other tools in: also the baskets used to hold victuals, made of the leaves of the cocoa-nut tree, are generally made by men.

285 *Bawlá*, mats for thatching houses, are either
[338] made by men or women, but more frequently by the former.

462 Most of these mats, baskets, &c. are made
565 by women of some rank as an amusing as well
[285] as profitable occupation, exchanging them af-
[436] terwards for other things: (See p. 95 of this
[303] volume). Making of combs, the teeth of which consist of the mid-rib of the cocoa-nut leaf, is also an employment of women of rank. Making
283 thread is an occupation of females of the lower
[462] order: it is performed by twisting the separate
[565] parts of the thread, in the act of rolling them with the palm of the hand along the thigh, and by a return of the hand, twisting them together the contrary way. The material of the thread is the prepared bark of the *olongá*.
413 Needles are generally made by carpenters out
237 of human thigh bones, which are procured from
727 their enemies slain in battle: the only use they
396 have for them is to make sails.

8: Collocott & Havea M, I-5 (no date) 1922
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539 824 826 **34. Hange ha tua-niu:** Like the midrib of a coconut leaflet.

Used of thin persons or animals, and of small, thin things in general.

539 824 **35. Hange ha vai fa:** Like pandanus water.

The meaning is, scattered in all directions like the water dripping on all sides from the leaves of the pandanus during a shower of rain.

36. Hange ha vao masalu ngaue: Like a field of waving *masalu*.

The *masalu* is a small plant found in quantity on the prairies of the island of Eua. These plants stand close together, and when the wind blows graceful undulations pass over the surface of the field, not unlike the waves that pass through a field of standing wheat. Applies to graceful action. (Compare No. 179.)

539 262 [137] **37. Hange kuo kai teve:** As though had eaten *teve* (*Amorphophallus campanulatus*).

This plant causes stinging and inflammation in the mouth, and may even bring on death. (A. Krämer, Samoa-Inseln, II Band, p. 384.) By proper treatment, however, it may be made fit for food. Used of one who has done something which he rues.

539 571 **38. Heka he vaa mei popo:** Getting on the branch (that is) almost rotten.

This has its obvious application of depending on a weak support.

539 824 **39. Hoko pe fau moe fau:** Joining hibiscus with hibiscus, or hisbiscus coming after hibiscus.

[283] [554] The comparatively tough inner bark of the wild hibiscus (*Hibiscus tiliaceus*) is frequently used as cord, and the expression for hibiscus to be followed by hibiscus is very commonly employed of a strong capable man in any position being followed by another whose qualifications are equally good. It is said that in former times when a Tui Tonga died the body was not buried in the usual way, but that the head and legs were cut off and replaced by the head and legs of another man slain for the purpose. Should this victim be a chief the joining of his head and legs to the trunk of the dead Tui Tonga was said to be a joining of the hibiscus with the hibiscus. There is actual tradition of a Tui Tonga whose body had been disfigured by a rail being supplied with limbs for burial by the devotion of another chief.

539 643 764 622 565

539 824 554 643 764 565 **40. Hoko ae fau moe polata:** Joining banana stem with hibiscus, or banana stem coming after hibiscus.

This is the reverse of No. 39 and indicates a strong capable man being succeeded by one of inferior qualifications. This too, is referred to the burial of the Tui Tonga. If the man who supplied the legs and head to be interred with the Tui Tonga's trunk were of low rank a piece

8: Collocott & Havea M,I-5 (no date) 1922
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112. Fakamohe mei ulu: To put to rest from head. 539 461

Used of that which is near at hand; a task that must be accomplished in the immediate future. The picture is that of a man who lies down to sleep with his working waist-cloth or his tools placed near at hand, both as a reminder of his task and to be easy of access when he awakes in the early morning. It is also used of something which is lying just ahead in the journey of life. *Fakamohe*, put to rest, besides being used for example, of putting a child to sleep, is also used of placing, putting, inanimate things. This latter sense fits best with the context of the phrase.

113. Fakaanga i hiku mamao: Criticise (something) at extreme distance. 539 183 626

An admonition that if you want to offer criticisms or advice upon anything, choose something that is well within your own experience and knowledge. Keep quiet about what you don't understand.

114. Fakaanga i tefito'i niu: Criticise at the foot of the coconut tree.

One who stays on the ground but is lavish with his advice to the man who has climbed the tree. Generally of the man who stays out of a job but has plenty of talk to offer to the one who has gone into it.

115. Fili akau vaivai: Picking weak tree. 539 461

Choosing an opponent in a contest who is not very formidable; generally looking out for a soft thing, like the woodman who picks an easy tree to cut.

116. Fokotuutuu ae fefie hu: To stack up almost rotten firewood.

A pile of such wood may make a considerable display, but when used will be quickly consumed. It will prove in fact to be a big stack of hollow pretension.

117. Hala i tangata ia: Being without man, that is, there is no man to carry out what is desirable. 539 626

A certain work languishes because it has no man fit for it. The expression is used also in rebuke of someone who misbehaves himself where there is nobody able to check him. You misbehave yourself in this way, but only because you are without a man, because there is nobody here to punish you.

118. Muomua puke fue: Grasping *fue* in front. 539 483 461 [283]

The *fue* is a creeping plant with strong tough stem, used anciently as a rope for drawing heavy loads. When a team of men was dragging a load the man in front just held the line and did very little of the actual

8: Collocott & Havea M,I-5 (no date) 1922
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539 554 627 **525. Tonuhia ae faiekina:** The innocence of the oppressed, or the oppressed is innocent.

This takes a very pessimistic view of the course that justice is apt to run when dealing with the poor and unfriended. The poor man is in the right, but what then? He has none to take his part.

539 565 **526. Tua fehui ua:** Commoner asking twice.

It is not good form for a commoner to question a chief about the subject of his conversation. Should a commoner question a chief and the latter take no notice of the inquiry the commoner would lay himself open to the rebuke of this phrase if he repeated his interrogation.

539 829 **527. Tua tala matangi:** Commoner telling wind.

Baker renders the phrase: "One forward with his opinion of the wind, though among sailors."

539 565 **528. Tua tangata kae eiki fekau:** The man a commoner but the bidding (of) a chief.

This means that one chief has sent a messenger to another chief bidding him do something. Although the herald is a man of no account yet chief number two has to take notice of his message because it comes from lord number one.

539 565 829 **529. Tuki a tua:** Striking of commoner.

This striking is not that done with the fist or a club. It is the impinging of speech on one's mental processes. The common people are not well informed or skilled in affairs, and the phrase indicates the confusing of counsel by the unwise suggestions and ill-founded speculations of the uninstructed multitude.

539 183 [137] [262] [283] **530. Vale ngau fau:** Fool chewing hibiscus (*Hibiscus tiliaceus*); a fool who chews hibiscus.

Term of abuse, but it is not apparent why chewing the hibiscus should be chosen as a special mark of folly, except that the plant is useless as food. The bark of the hibiscus is frequently used as a lashing and is often torn from the branch with the teeth to be utilized in this way. It is possible that the expression may have arisen as a designation of those who had to perform menial tasks; but we have no information on this matter.

CHIEFS

539 565 **531. Aoao ki majijiva:** Useful to poor; according to Baker "kind, thoughtful to the poor."

The care of the chiefs and provision of clothing, bedding and food for them was a heavy tax on the people. This phrase signifies primarily a chief who was easy to get along with; who was satisfied with whatever was at hand.

8: Collocott & Havea M,I-5 (no date) 1922
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539 526 183 **608. Fanifo kave papa:** Surf-riding, borne by board.

The man who is not very skillful at the sport depends entirely on his board to get safely over the breakers, whereas to the real expert the board is a matter of indifference. Applied to the man who gets safely over his difficulties rather through assistance afforded him than by his own intrinsic merits.

609. Holo pe tuu he koe ngalu e faji: Keep places, for the wave will break.

An expression taken from the sport of riding the breakers *(fanifo)*. It may happen that the swimmers have to wait a considerable time for a suitable breaker, and that some of them will become impatient and begin to swim about or to divert themselves in some other way rather than watch attentively for a good wave: but the advice of the expert is to keep continually ready for the wave when it comes; only thus can one be sure of utilising opportunity when it does present itself. It is an exhortation to watchful patience.

MISCELLANEOUS

539 224 283 **610. Fai mai e hele pulu ki he hele kalava:** Snare of coconut husk brought to snare of fibre of the coconut leaf stem.

Of these two snares that made of the fibres taken from the stem of the leaf is tougher and stronger than that made of fibres from the husk of the ripe fruit. If these two sorts of cord were knotted together and a strain put on at the ends the weaker would break.

[571] Applied to a man trying to get the better of one who is stronger or cleverer than himself.

539 526 **611. Hange ha hapohapo tangamimi:** Like catching a bladder.

The pig's bladder is frequently taken and blown up, thrown about and caught by children at play, but on account of its lightness it is apt to bounce from the hands and is hard to catch. Used of boats tossed about by the waves, and generally of that which is elusive and difficult to get a firm hold of.

539 524 **612. Hange ha moli touhuhu:** Like a stabbed shaddock.

Originates in a boys' game called *touhuhu*, stabbing. A shaddock was suspended by a cord at a convenient height above the ground and the players stood round armed with small sharp sticks. The shaddock was sent swinging round and the boys made jabs at it with their sticks. A point was scored whenever the shaddock was impaled on the sticks, each player counting his own points. The score ran from six to ten, that is, the player won who first pierced the fruit five times. The shaddock by this treatment [701] was soon battered and war-worn. The phrase is applied especially to a much wounded warrior, and generally in the same way as we speak of a person or thing that is much scarred, war-worn.

10: Hornell E,N-4,5 (1925) 1936 OU9 Tonga OU9

between 12 and 15 inches. (See fig. 180.) There are indications of a definite head and stern, one end being sharp or bluntly wedge-shaped, the other roughly pointed, characteristics also of Samoan and Tahitian hulls. The ends are solid for a distance of several inches.

The outrigger consists of two straight booms, projecting outboard on the port side 5 to 7 feet, and commonly connected with the float (*hama*) by U-shaped withies (*tukituki*). The float is cylindrical; in the smallest canoes it is pointed at both ends, in the larger only at the fore end, the other being truncate. As in Samoa the fore, free part extends well forward, though not quite to a level with the head: the after end, behind its attachment to the boom, is short.

The U type of connective, characteristic particularly of the *bobao*, consists of a pair of tough flexible withies to each boom, each withy bent into a deep bow or U shape, the limbs spread from 8 to 10 inches apart in the *bobao* and about 12 inches or more in the *tuingutu* (fig. 181).

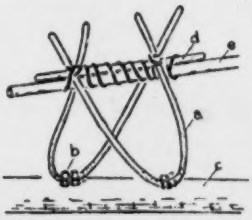

FIGURE 181.—Double U-shaped outrigger attachment, Tonga: each withy (*a*) lashed at its base to two pegs (*b*) driven into float (*c*); horizontal cross bar (*d*) tied under crossed arms of withies; end of boom (*e*) then slipped under cross bar and the two lashed together by several turns of cord or sennit (Vavao, 1925).

The bent base of each withy is secured to the upper side of the float by lashing passed around two short, stout pegs driven abreast into the float. One of the pair of withies is attached to the float some inches forward of the axis of its boom, the other at an equal distance on the after side. The pegs to which the withies are lashed project about 2 inches; the heads are slightly swollen.

The limbs of each U are turned obliquely upward, inclining toward those of the opposite pair, with the result that the upper ends of the two withies cross one another. To keep them in position, a short rod of *toa* (*Casuarina*) is inserted as a brace immediately beneath their decussation and lashed thereto in this position. To make connection with a boom, the outer end of this is slipped under the bracing rod and made fast with sennit lashing.

This accessory device is of service when the outrigger frame has to be partially dismantled: all that is necessary is to unlash the braces from the booms; the float with its connectives held together by the braces may then be removed from attachment to the booms without disturbance of the various parts. Reassemblage can also be effected in a fraction of the time that otherwise would be necessary. In no other Pacific area does this device exist.

Exceptional forms of float attachment are occasionally found. In Lifuka a very small and roughly made *bobao* was seen in which the connection was by means of paired straight stanchions of the type characteristic of the *tuingutu* (fig. 180, *a*). Another in the same island had a mixed connection, the after boom having the paired U connection, the forward one the paired stanchion form.

A third attachment is found on the great shallow backwater lagoon in Tongatabu, where there are in use a few rude dugouts of such low freeboard that direct

10: Hornell E,N-4,5 (1925) 1936 OU9 Tonga OU9

[501] attachment is possible, the outer ends of the two light bamboo booms being lashed directly to the float; such craft are readily improvised when the occasion requires.

Early in the nineteenth century the *bobao* was more carefully constructed, according to the description and figures furnished by Paris (1841, pt. 1, p. 123, pl. 122, figs. 12-14). Unlike the present-day *bobao* the dugout underbody had fairly long end covers roughly sewn on, together with a low washstrake and transverse breakwaters protecting the open waist. The ends were similar and bluntly pointed. Across the washstrakes were lashed the inner ends of three outrigger booms; the outer or end booms were attached to the float by means of two pairs of convergent overcrossed stanchions, and the median one was supported by a single vertical stanchion. No cord brace was employed, if the figure may be trusted. As [565] drawn, the float, like the hull, was pointed at each end (fig. 182). Paris remarks

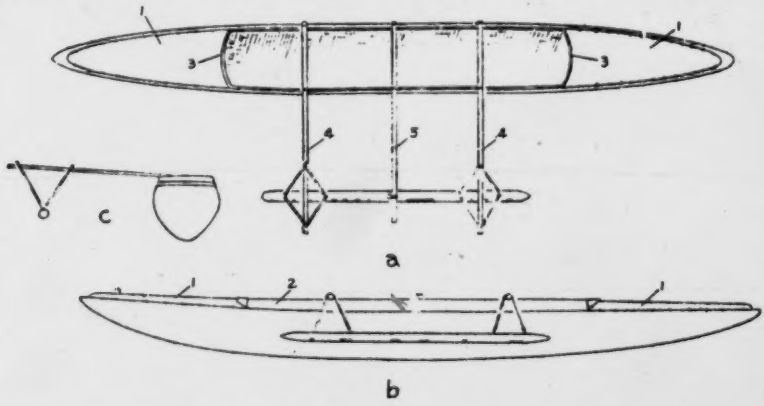

FIGURE 182.—Tongan *bobao* of ancient type: *a*, plan; *b*, side view; *c*, cross section, showing boom tilted upward slightly in its outboard section as in Samoan canoes; 1, end covers; 2, washstrake; 3, curved breakwaters; 4, outer boom attached to float by two pairs of converging overcrossed stanchions; 5, median boom, connected by one upright stanchion (after D'Urville, 1846).

that the rounded hulls "were neither polished nor rubbed with oil and appeared to be used only by the lower classes of the population". Its length seldom exceeded 5 meters. This old type of *bobao* is intermediate in design between the existing degenerate type and the larger sailing one, the *tuingutu*.

TUINGUTU

The *tuingutu* has also a dugout hull. Being a larger and more valuable craft and adaptable for sailing as well as paddling, greater attention is paid to the finish. (See fig. 183.)

[171] The two ends are more carefully shaped and approximate more closely to the equivalent Samoan form, the *soatau*, the sharp fore end often with a distinct though slight concavity in the cutwater as seen in side view, the stern running to a point, and in a few canoes ending in a downturned subtriangular knob, useful when tying the canoe up, and of exactly the same shape as seen in the better-finished of Samoan canoes. There are the same rounded bottom and [283] tumble-home sides as in the *bobao*, but here a narrow washstrake, 5 to 6 inches wide, is sewn on with sennit, each pair of holes separately sewn and all the holes plugged with wooden pins. A batten of split bamboo is inserted on the outside along the joint under the stitches.

10: Hornell E,N-4,5 (1925) 1936 OU9 Tonga OU9

They rest upon the edges of the washstrakes, to which they are lashed by sennit or by cord passing through, usually, one hole a little below the gunwale.

The float varies considerably in shape and relative length; in the smaller or paddling canoes it is cylindrical, the fore end conical, the after one truncate; in the larger, which are frequently used under sail, it is roughly canoe-shaped, flat above, rounded below, and with the ends sliced away on each side and from below to a point.

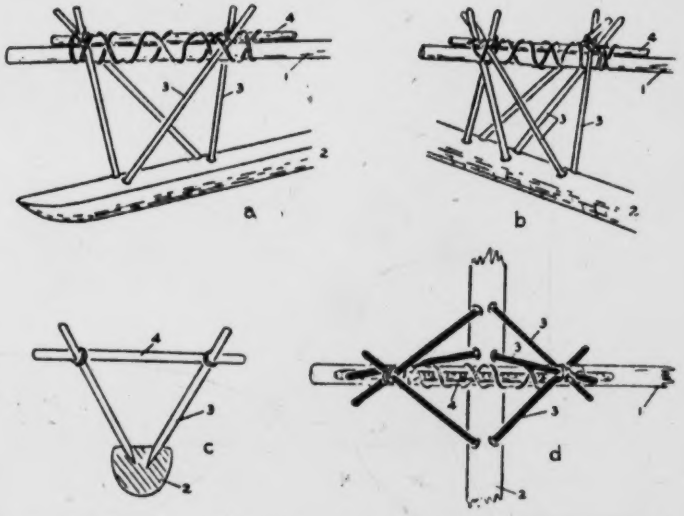

FIGURE 185.—Tongan stanchion attachment: *a*, two-paired, and *b*, three-paired form of stanchion attachment; *c*, attachment separated, float seen in cross section, only one pair of stanchions shown; *d*, top view of *b*; 1, boom; 2, float; 3, stanchions; 4, brace rod.

The float connection is either of the U type or by means of paired stanchions. The U type is the same as described for the *bobao*; the stanchion type is comparable with the Samoan and Fijian types. Two varieties of the stanchion type exist, the double and treble. The double, except in one detail, is similar to the Fijian, two pairs of obliquely converging stanchions crossing above the boom. The detail in which it differs is the use of an intermediate and horizontal brace stick, about 2 feet long (fig. 185), to which the heads of the stanchions are directly lashed prior to the lashing of the brace in turn to the end of the outrigger boom; this is the same device as that employed in conjunction with the attachment of the U connectives in the *bobao*. In the treble variety an additional pair of stanchions is present; these two extra stanchions, which are inserted close together in the float immediately under one side of the boom, diverge upward from this point in the plane of the long axis of the boom, to which they are respectively lashed at the same points as are the members of the two other pairs (fig. 185).

The largest *tuingutu* (fig. 183) was 30.5 feet long, the beam outside at the gunwale 13 inches, at the bilge 20 inches; depth of dugout hull 15.5 inches; width of washstrake 5.5 inches, a total depth of 21 inches; length of float 16 feet 9 inches; distance of float from gunwale 6 feet; booms three, attached 14.4 inches above the float; arms of U connectives 12 inches apart where lashed to the booms; booms 4

10: Hornell E,N-4,5 (1925) 1936 OU9 Tonga OU9

Corroboration of the course of evolution above outlined is afforded by the form of attachment seen in a canoe of Mare, in the Loyalty Islands, where, although a Y connective is employed, a very short peg is inserted into the float at each side of the shank of the Y, to which both pegs are lashed. This would appear to represent an intermediate phase between the New Caledonian Y and the Tongan U attachment.

On the other hand, it is possible that the U attachment was introduced into Tonga by a section of the Indonesoids who were the last-comers into Polynesia. In the extreme eastern islands of Indonesia the U attachment, but in the single U form, is common and occurs in the same Moluccan localities as the *orembai* and its near relatives. A double U attachment, but undercrossed, occurs along the whole coast of New Britain and in the Witu Islands: in San Cristoval at the south end of the Solomon Islands it recurs and this time in the overcrossed condition. However, in all these instances the U withies are attached to the float by cord lashings passed around the float itself. I incline to the conclusion that the U attachment seen in Tonga, where the withies are attached to accessory pegs and thereby have indirect attachment, has had a different origin as suggested above. Further, what evidence we have indicates that the U attachment is too recent in Tonga to have been introduced from a comparatively ancient Indonesian source.

The story of Oceania contains many instances of the substitution of new designs for old in canoe details; the islanders are receptive and quick to recognize and adopt any detail in the design of canoes of other islands which by accident or otherwise come under their notice. Instances in point within recent times are the adoption by the Marquesans of a plank connective in place of paired stanchions and the Samoan utilization of the whaleboat design in the construction of their great modern paddling canoe, the *taumualua*, displaced in the present century by the long *fautasi*, rowed by many oars.

DOUBLE CANOES

Tongiaki

The *tongiaki* was the form of double canoe in use in Tonga till toward the end of the eighteenth century, when the Tongans began to substitute the Fijian *ndrua* (Tongan *kalia*) as a more serviceable and weatherly craft. Fortunately several excellent illustrations of the *tongiaki* and a fairly full description by Cook himself exist. It happened that the change-over of types was beginning when Cook visited the islands in 1773 and 1774; he saw both and has several references to each.

Schouten (1619, p. 39) came across a *tongiaki* off Tafahi (called by him "Cocos Island") in 1616; it had been drifted out of its course and the crew were in a starving condition:

> [The vessel consisted of] two long and handsome canoes connected together but at some distance apart. Along the midships region of each, two broad planks of red wood were secured upon the edges [one on each side]; across these [washstrakes] small beams were laid [from hull to hull] and over them a platform of planks, the whole carefully fitted and made watertight with all the parts strongly lashed together. Toward the fore part of the starboard hull was stepped a short mast, forked at the top, on which was slung the sail; this was of matting and made after the fashion of those carried by Spanish boats [i.e., the lateen]. . . . Their cordage was strong and well laid. [See fig. 189.]

Two days later they came across two other vessels of the same kind and the chronicler records:

> The crew of one of them had aboard their vessel a canoe which they could launch whenever the occasion required. [Compare the Samoan custom of shipping two *va'a-alo* aboard

12: Vason M-3 (1797-1801) 1810
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I wished to have my little abbee as complete as possible; and therefore gave my workmen[1] all the encouragement in my power; joined them in their labours, and fared the same as they did.

In the course of nine or ten months we began to gather the fruits of our labours. We had plentiful crops of plantains and tarros. The tarro is a root resembling a carrot, which puts forth many shoots, that strike downwards for six or eight inches, by which the root is distended like the turnip till it measures twelve inches in circumference; the top of it, like that of the pine, will grow again when set. The roots soon spread over a large space, and when scraped and baked, are very pleasant and nutritious. Having a good supply of vegetable food, I was desirous of varying and improving it with fish: and therefore set upon contriving some expeditious mode of catching them, and at length improved upon the method of fishing at Tonga, by pursuing it upon a larger scale.

For this purpose, with the assistance of a number of men, I stripped off the inner bark of trees; and, splitting it into fibres, twisted them into a large "moya" or rope, which when drawn out extended a full mile. Procuring then a large quantity of the branches of the cocoa-nut tree, and stripping of the peel, together with the leaves, we wrapped it round the rope, in such a manner that the leaves formed a fringe round it. This they called "Ooloa" or a fishing rope.

1 [Errata: this should read "workmen." Cf. errata sheet, cat. 116, p. 235 --Analyst]

13: Beaglehole & Beaglehole E-5 (1938-1939) 1941
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Vavau
Pangai

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the activities of the working-group he has had his land cleared in return for giving up one year's harvest from the land.

The owner of the land may also call together working-parties of friends and relatives for a day's work on his land whenever he wants to carry out some large-scale operation, such as clearing, planting, or making copra. From five to twenty men may help him with cultivation, or any number up to thirty men and women may participate in a copra-cutting group. The leader prepares a large feast in the bush consisting of staple foods together with relishes of pork, fish, and chicken, as a token of thanks to the working group. Whenever a group works together, each for his own interests, the feast has no part, but working in the group serves to lighten the burden of work. Only when the working party has come together to work to the advantage of one of its members is food prepared and offered to the group as a return for services rendered.

(594)

HOUSE-BUILDING

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The villager wishing to build and own a Tongan-style house must first prepare large quantities of food for his workers and also large quantities of sennit *(kafa)* with which to fasten the house together. The preparations for a large house may take at least one year to complete. During this year pigs would be obtained and fattened, the requisite timbers and poles brought in from the plantations, sennit would be made and extra amounts of food-staples would be planted.

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Even for a smaller house at least six thousand feet of sennit is necessary. To prepare this, the prospective owner collects from his plantation about one hundred coconuts of the *niu kafa* variety (nuts with an especially long husk). He is assisted by several of his friends whom he feeds while working with him. The nuts are husked and the husks placed in a large, specially prepared oven. This oven is about eight feet long, eight feet wide, and three to four feet deep. The bottom is lined with stones and further stones are placed on top of the wood. After the wood has burnt down, the coconut husks are placed in the oven, the oven

13: Beaglehole & Beaglehole E-5 (1938-1939) 1941
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Pangai

342 283 closed, and the husks baked for about four days. Then the oven is opened, the husks removed and buried in the reef shallows for a further three or four days. Then the husks are placed on a wooden base and pounded with a wooden pounder until all the inter-fibrous material is removed. The fibres are dried and are now ready for braiding.

342 283 464 476 The braiding is done by a working-party consisting of men and women who are invited to a *kava* party. The fibres are rolled on the thigh or sole of the foot and are made into three-ply braid. Half a dozen men and women, working industriously will probably braid up to one hundred fathoms in a long evening's work. Until the required amount is finished, the prospective owner will use all his spare time braiding this sennit.

342 335 463 [465] If the house is to be well built and something to be proud of, it is necessary to engage the services of an expert builder to supervise the building, lay out the framework, fit the poles and beams securely and neatly, and to tie the more ornamental and complicated lashings. If such an expert is not a relative, he is given today for his services a gift of perhaps two pounds in cash for a one-fathom house, six pounds for a two-fathom house and proportionately more for a larger house. The size of the house is referred to in terms of the length of the rectangular central portion of the house, excluding the extra length provided by the apsidal ends. [461] A two-fathom house may take some two weeks to build if the work is carried on without major interruptions. If the expert is a member of the household or a relative, he would expect only a gift of a large pig together with food-staples for his services.

342 464 476 The heavy work of building and thatching together with all minor jobs are carried out by a working-party made up of members of the household, relatives, and friends. The workers are fed generously by the house-owner. Women make all the thatching-sheets, wall-mats and floor-mats. They also help prepare the food for the workers. The division of labour and the organization of work are such that many are called upon to help before the structure is at last completed.

13: Beaglehole & Beaglehole E-5 (1938-1939) 1941
OU9 Tonga OU9
Vavau
Pangai

when respect is due to a superior. The materials are pandanus-leaves. The plaiting technique is typically Polynesian. The finest mats worn as *vala (ta'o vala fala)* are very scarce in Pangai today. They are about eight feet by six feet in size and plaited with twelve to fourteen elements to the inch. Such mats take an ordinarily industrious woman from two to three years to complete. Few Pangai women seem to have either the skill or the patience to make these mats today. They have therefore a great scarcity value. They are worn only on Sundays, special festive occasions or when meeting a superior. When not in use they are kept in safe, secret places to avoid any possibility of theft.

Many of the fine mats worn today have been inherited. Thus one woman has inherited hers from her mother's mother and expects in turn to pass it on to her own daughter. Both men and women wear these fine mats fastened with a length of braided or twisted sennit termed *ta'o vala kafa.* The sennit is worn round the waist on top of the mat. There appears to be no single and specific technique for making this sennit "belt." Each man makes his according to what skill he has at his command.

As the fine mats become rarer still in the village, it is likely that there will be developed some new material through the use of which respect may be symbolized. Possibly one of the finer and more expensive commercial cloths will be adapted to this end and will become as necessary an item of clothing as the fine mat is today.

EXPERTS

For most of the work activities of this Tongan village no more expert knowledge is required than is possessed by the average man or woman. He or she is capable of doing the task that is required or of acting as leader of group-work. Some types of work however, require the leadership and direction of a recognized expert (generically, *tufunga*), one who has special knowledge, acquired through training, of the relatively complex techniques involved. In Pangai today there are four recognized experts in the making of European-style houses, one expert in the building of Tongan houses; one expert undertaker; four expert dug-out canoe makers; two experts in the art of making the built-up plank-canoe;

14: Thomson G-3 (1886-1891) 1894
OU9 Tonga OU9

Haapai, could not as yet interfere in the affairs of Tongatabu. As soon as the office of Tui Kanokubolu became vacant by the death of Mulikihaamea, Tukuaho successfully schemed for the election of his father Mumui to the title, that he himself might wield the power. His father was already so old that he could not long stand in his way. Meanwhile a bitter jealousy sprang up between Finau and Tukuaho, none the less bitter that it was concealed. It was unfortunate for their country that the two men should have existed in the same generation. Both ambitious, both unscrupulous, both of inflexible purpose, the tiny stage was not large enough for both to play their parts, and a struggle to the death was inevitable.

The Tui Tonga's fish-hook.

At this juncture the ship Duff, fitted out by the London Missionary Society, landed nine artisan missionaries, who attached themselves to various chiefs, and were thus enabled to record the events of the most stirring times in Tongan history. Unfortunately for themselves, they quarrelled with two runaway sailors who had landed some months before them, and were already in high favour with the chiefs; and these men lost no opportunity of damaging them with the natives, by representing their religious services as witchcraft designed to destroy them,—a statement to which a prevailing epidemic among the chiefs gave colour.

22: West M-3 (1846-1855) 1865 OU9 Tonga OU9

slightly pink farinaceous flesh. The best sorts surpass the finest pear in excellency of flavour. These are eaten raw, or they may be baked, or stewed, according to fancy. The Chinese dwarf banana, (*Musa coccinea*, or *M. Chinensis*,) was introduced only a few years since, and has already been widely spread through the islands. The fruit is of a very delicate flavour, and the stem of this species not being more than four feet high, it is much better able to endure the periodical gales that level to the ground all the taller sorts. It has, consequently, become a great favourite with the people, and will, probably, supplant many of the others entirely.

No use has yet been made, by the Tonguese, of the stem of this tree, in the manufacture of cordage, as is the practice in Manilla and elsewhere. Its leaves, however, serve for several useful purposes. One leaf can be readily fashioned, in a few minutes, into at least half-a-dozen drinking cups; while by gently heating an entire leaf over a fire, through which it is rendered at once pliable and tough, wrappers can be made in which to bake fowls so as to retain their gravy, or in which even fish-soup can be cooked without any loss of the liquid. Indeed, we have frequently seen a banana-leaf bag, containing a gallon, or more, of cocoa-nut oil, that had been carried safely therein for many miles. Portions of the juicy stem of the tree are always brought, at the conclusion of a meal, to be used by the guests, instead of soap and water, in cleansing the fingers, after these have performed the duties of knife and fork. It does this very effectively, when well shredded, by rubbing between the hands.

Among other edible fruits of Tonga may be

22: West M-3 (1846-1855) 1865 OU9 Tonga OU9

sea-shore presents quite a lively scene. Here some are sail-making, others spinning ropes, others plaiting *kafa*, or the cocoa fibre sinnet, and others again are employed in scouring or repairing the hulls of the various large sea-going canoes.

January 31st.—The Haabai portion of the king's Fijian fleet sailed for Tonga to-day. They have been waiting impatiently for several days for those that are coming from Vavau. The departure of so many large *kalias* was an imposing sight. Many tears, however, were shed by the friends of those who have gone; it being very probable that numbers of these voyagers will never return.

The subject of this expedition to Fiji, and of its results, requires a more extended and consecutive view of it than our journal would afford. It was the last event of moment that occurred during our remaining residence in the Friendly Islands; but inasmuch as the scene of Tonguese movements lay in Fiji, we must be pardoned for entering into certain details that have already appeared substantially in another work.* We also feel this to be very necessary, because in a still more recent publication of considerable note, some of the facts connected with the history have been misrepresented and distorted, to the manifest prejudice of the Tonguese people, and more particularly to the injury of King George.

In a work we have already named in former pages it is said, "that King George, the present ruler of Tonga, having subdued a rebellion in which Maafu, a leading Tonguese chief in Fiji, took part,

* "Fiji and the Fijians," vol. ii., pp. 189-196. London: Heylin. 1858.

25: Collocott M-5 (no date) 1927 OU9 Tonga OU9

those whose mothers are noble on the side of the Hau, Tu'i Kanokupolu, and fathers are noble in the Tu'i Tonga family), pea tapu moe Sina'e ki mu'a (Tafolo, and perhaps Tamale), pea tapu moe Sina'e 'eiki, pea tapu moe Sina'e ki mui (perhaps Tamale, or Manumua and Lomu), pea tapu moe Tu'i Hoi, pea tapu mo (moe) Faoa Manafa. Koe ngata e tala 'o Fanakava kae ata kae fai hano tala (The end of the telling of Fanakava and it is clear to make its speech).

Before the *kava* is distributed the presentations of food and *kava* are taken outside the ring. Motu'apuaka will probably order them to be taken for Lauaki, who will superintend their distribution, either personally or by a deputy. If there be a chief present whom it is desired to honour, for example a visitor, Motu'apuaka may order that these presentations be taken for his *matapule;* or Lauaki, in making the actual distribution, will see that he gets a large share. In such distributions the chiefs for whom portions *(inasi)* are designed are not named, but their *matapule,* and the *matapule* express thanks for the gifts. Visiting chiefs thus honoured will be expected to provide a good reception when, later on, they are visited in their own homes.

It will be recalled that three men are seated at the *kava*-bowl, one at either side, and one behind facing the king. The man on the side, in a line with the *matapule* who is directing operations says, when the straining is finished, *Kuo ma'a 'ae kava ni,* This *kava* is clear. The *matapule* responds *Tokonaki 'o fakatau,* Make ready and deal out. Then the cups, which have been in making whilst the *kava* was being brewed are brought."

Of the two men seated at the side of the bowl one "calls," that is, calls out as each cup is filled; and the other removes the little pieces of *kava* that adhere about the rim of the bowl, usually employing a small piece of coconut-leaf

[8] Fanakava, so far as one can get information about it from living Tongans, is remembered mostly as a sanctuary. It is a very sacred part of the Tu'i Tonga's ground in Mu'a.

[9] Although cups of coconut-shell are used on lesser occasions the cups used at great ceremonies are of folded plantain leaf. The coconut-shell cups of Niua Fo'ou differ from those of other parts of the Tongan Group in having a hole near the edge through which is threaded a cord of twisted hibiscus fibre, to serve as a hanger.

28: Buck D,E-4 (no date) 1941 OU9 Tonga OU9

534 position when played. In lieu of direct information, I again assume that in the double-row pan-pipes, the closed row is next to the mouth because it is the closed reeds which are
534 sounded. It is interesting to note that of the pan-pipes in
171 the Bishop Museum collection, the double-row instruments from the Solomons and the New Hebrides have the shortest reed on the right. The curved open ends appear to be peculiar to Tonga, for all the Bishop Museum instruments from New Guinea and Melanesia have straight upper ends.

534 An examination of the four wider instruments in fig. 1, *a-d*, shows that though apparently arranged irregularly as regards length, they are definitely arranged in two series. In all four, the right series consists of five reeds, commencing on the right with the shortest reed in the whole instrument. Moving in order to the left, the second reed is short, but a little longer than the first; the third is longer still and of medium length; the fourth is long, usually the longest; and the fifth falls back to the same medium length as the third. Thus the fourth longest reed is supported on either side by mediums of equal length.

The left series consists of five reeds in three instruments (*a*, *b*, *c*) and four in the other (*d*). The series commences with a short sixth, always a little longer than the first. The seventh is medium, the eighth long and the ninth medium. Thus the long reed (8th) is again supported on either side by mediums of equal length. The instrument with nine reeds stops here, but in the other three, the tenth or left marginal reed differs. In the Cook (*a*) and the Webber (*b*) instruments, the tenth reed is long, but in the third (*c*), the tenth is short, corresponding in length to the first (6th) of the second series. The reeds in the Tongan instruments were thus not placed haphazard, but according to a definite musical scale that Andersen or some other musician could work out if the instruments were available for testing.

The small instrument (*e*) with five reeds is really a half-instrument and though it departs from the preceding types in having the reeds arranged regularly in sequence of length, it follows the general plan in having the shortest reed on the right.

534 The lashing-technique, similar in all five instruments,
284 consists of two spaced rows made with coconut-husk fibre.

39: Gerstle & Raitt C,Q-4,5 (1952-1972)
1974 OU9 Tonga OU9

532 Tongan art by western or contemporary standards, as has so often been done; it should rather be viewed in terms of the complex social and cultural matrix from which it sprang.

Wood being the main medium used long ago, wood craftsmanship and carving in the form of canoes, houses, war clubs, spears, paddles, kava bowls, statues and wooden "headrest" pillows became a polished art in the Tongan society, performed only by highly specialized artisans called *tufunga,* whose skills were most often transmitted by heredity. As religion was a major facet of life, the Tongans had a god as a patron for each category of artistic activity. Thus, art reflected their system of religious beliefs, values and rituals, as well as their extremely structured socio-political organization.

[771] [776]

342 283 284 The traditional Tongan house, similar to that of

[p. 9-c]

342 nearby Samoa, was an oval structure with roof
283 thatching made from sugar cane leaves or coconut
284 fronds, and with exquisite sennit lashing on the inside rafters. Tongan clubs were characterized by
411 skillfully-incised, geometric surface patterns, at
531 times by inlaid pieces of pearl shell or whale's tooth,
237 and occasionally by designs depicting animals (zoomorphs) or humans (anthropomorphs); these decorations were sometimes applied over a period of time, certain bits of ornamentation being added in commemoration of a particular battle victory.[A2]
532 Carved statues, which were used to a minor degree as representations of deities, were usually wooden and female, with a rounded, stout body and an oversized head. The few, excellent ivory statue carvings from Ha'apai preserved today in museums are considered to be among the finest creative art pieces in the history of the Pacific.[B3]

[p. 10-A]

A [See category 411, pp. 9A, 10B and 11--Analyst]

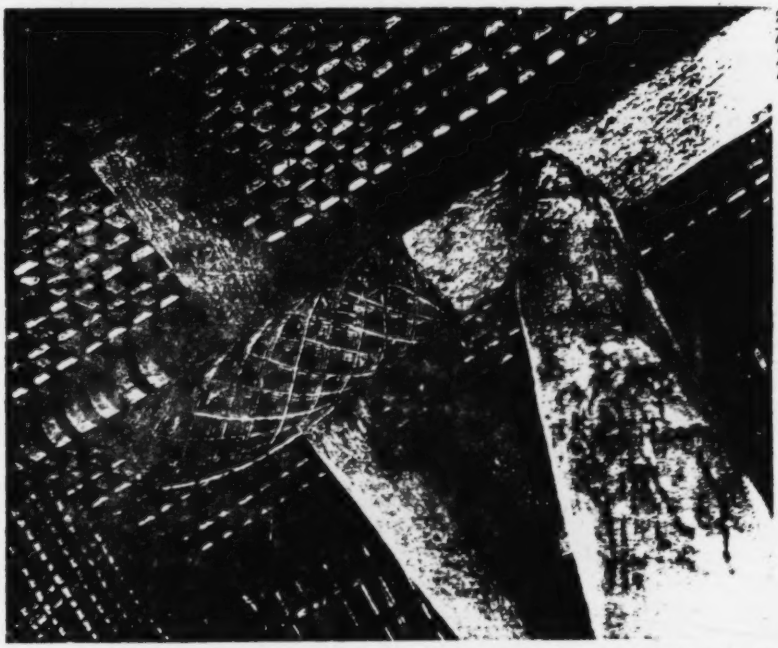
B [See category 532, p. 8--Analyst]

532 evidence of idolatry and heathenism. Whereas wood
177 carving had been done previously with adzes or tools made of shell or tooth, local artisans became attracted to the more highly perfected metal instruments of the foreigners. Strongly influenced by materialism and other characteristics of western civilization, the Tongans abandoned the majority of their former artistic activities, and consequently, the
[462 entire realm of Tongan art has suffered. For the
287 most part, only the arts of women (e.g. tapa making,
285] basket and mat weaving) have survived up to the present day in Tonga.[7]

341 Tongan architecture has obviously been
342 influenced by contact with the west; rafter lashing with hand-braided sennit is rarely to be seen any
177 more, and it is not uncommon to find Tongan
283 houses today with corrugated iron roofs.
284 Hand-carved war clubs and other weapons, as well as
411 the skillfully-designed double canoes, have been
501
177

[p.16-A]

39: Gerstle & Raitt C,Q-4,5 (1952-1972) 1974 OU9 Tonga OU9



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284
283

Intricate roof latticework and beams lashed with coconut-fiber sennit add richness to this old Wesleyan church (left) in 'Ohonua, 'Eua. The superb lashing (close-up above) is a traditional art form which is slowly being forfeited to modern architectural practices in Tonga.

Na'e lahi 'aupito hono ngaue'aki e kafa 'i he langa fale he taimi ko e, 'o hange ko ia 'oku ha faka'ofo'ofa mo masani 'i he ongo ta koeni 'o ha falelotu Uesiliana 'i 'Ohonua, 'Eua.

54: Cook G,T-5 (1777) 1967 OU9 Tonga OU9

till it is the length they intend it. The hollowed side of the log of wood is to receive the ends of the unworked cloth, so that they may be out of the way of the work women. They have of this cloth of different degrees of f[i]neness, according to the bark on which it is made; the finest is made of the Chinese paper Mulberry tree.[1] The Courser sort of which they make very large piec[e]s does not receive the impression of any platen, but is made on the log only.[2] Of the finer sort, they have some that is striped, chequered and other patterns of different colours, but how these Colours are laid on I can not say as I never saw any of this sort made.[3] All these sorts will resist water for some time and that which has the strongest glaze will resist it the longest.

The next considerable Manufacture is matting in which they exceed all the places I have been at both in texture and beauty. Many of those which are made of the bark of the Poerou[4] so far exceed those they have at Otaheite, that they are not a bad article to carry their by way of trade. They also excell in making baskets, some are exceedingly neat and they have of them of many different patterns. It is almost needless to say that they make ropes and lines of all sorts, Nets for fishing, fish-hooks and all manner of fishing geer with the greatest facility. But in what I think they most excell in point of workmanship, is in the building their Canoes, for an account of which and the manner of Navigating them I refer to the narrative of my last voyage.[5]

Masonry Masonry I have seen none but in the walls that inclose their Morais and their is nothing extraordinary in them but the size of the Stones, some of which are ten or twelve feet in length, four or five in breadth and one or more in thickness.[6] I examined several of these stones and found them composed of Coral sand and small Marine shells, and therefore concluded that they had been hewn from of the surface of the coral rocks. But even to do this with thier tools is no little work for before they got Iron they had only adze[s] of stone, a chissel of bone; a coral stone and sand and the Skin

[1] *Broussonetia papyrifera*, Tahitian Aute, Tongan Hiapo. The dyed cloth thus described is properly called *ngatu*, not *tapa* as in the other islands.

[2] It was made from the bark of the young breadfruit tree, Mei (Tahitian Uru). This plain cloth the Tongans called *tapa*; it was, says Mariner (II, p. 206), 'seldom worn, but is chiefly used for various purposes at funerals'.

[3] With a small stick used as a brush, as is still done.

[4] This was the Tahitian name, Purau, for the common *Hibiscus tiliaceus*. The Tongan name was Fau.

[5] II, pp. 269–5, 447–8.

[6] Cook's misuse of the word 'morai' (*mala'e*) has already been noted. The reader interested in the remarkable structure of *fa'itaka* and *langi* can do no better than refer to the extended account in McKern's *Archaeology of Tonga*, pp. 30 ff.

55: Anderson D,T-5 (1777) 1967 OU9 Tonga OU9

rains hard in the day they are guided by the swell of the sea & wind. As another proof of the distance or at least of the stay they make at some places, they always carry a considerable quantity of Cloath, matts &c and provisions, the last of which they dress on a sort of hearth made of sand & stones plac'd near the fore part of the stage. The number of people, amongst which are always several women, being at least four times more than is sufficient to Navigate the Boat implys some other business, though perhaps it may be for the relief of each other: for here as in all other cases there seems to be such a perfect unity amongst them that when they are oblig'd to paddle from a calm or any other accident, the whole crew and rowers themselves join in songs and a musical recitative to give an agreement to their strokes and ease the irksomness of that unvaried labour.

The only tools they have to make these boats are Hatchets, or rather thick Adzes, of the smooth black stone mentioned before (but some want the projecting part behind), an augur made of a sharks tooth fix'd on a small handle, and a rasp of a rough fishes skin laid over & fastend on a flat piece of wood thinner on one side with a handle. The vast labour they must be at and the time that is spent with their [boats], being perhaps their most perfect mechanical production, are probably the reasons for being so carefull of them, for they are built and preserv'd under long shades of two sides which reach to the ground & incline towards the top, so that the ends which are both open represent a half ellipsis on its base; but when that cannot be done they always cover the deck'd part with Cocoa leaves after they are haul'd on shore to prevent the sun hurting them.

The same tools are all they have for other works, if we except different shells which they use as knives, but there are few that require these unless it is some of their weapons, the other articles being chiefly their fishing materials, cordage and a few others. The Cordage is made from the fibres of the Cocoa nut husk, which though not more than nine or ten inches long they plait about the size of a quill or less to any length they please, & roll it up in balls from which the larger rop[e]s are made by many of these being tied together and twisted. The lines they fish with are made from the [1] and are as strong and even as the best cord we make, resembling it almost in every respect. Their other things for that purpose are large and small hooks, made with a pretty straight back and a point fix'd on the inside near the end. The last are made entirely of pearl shell, but the first only coverd on the back with it, & the points of both commonly of tortoise shell, those of the small being plain the others

[1] Tou, not the *Malachia* but *Pipturus argenteus*, widely used for this purpose in the Pacific.

56: Samwell D,T-5 (1777) 1967 OU9 Tonga OU9

283 Their Cordage is another considerable article which they make of the rind of the Cocoa nut. Some of this they have of a thickness of a
[226] 4 or 5 inch rope, which is used in the rigging of their Canoes; fishing
[286] & other small Lines they make exceeding neat and strong from the Fibres of a Plant[1] & of these Lines they make excellent fishing Nets.

These people excell in making baskets, of which they have 3 or
285 four different Sorts & sizes all made of the rind of the Cocoa nut; one kind is made very strong which is that in most common use, another which is more for Shew are made exceedingly neat & beautiful with white beads & sometimes red feathers worked in them, these we esteemed as some of the greatest Curiosities among them; a third sort are constructed in an odd manner & have a very antique Appearance which made us compare them to Cathedrals[2]—they have other Sorts
391 still but those above mentioned are the principal. Their other
412 Manufactures consist of their weapons of war which have been already mentioned, their fishing Tackle of various Sorts, much like
301 those of Otaheite, their working Tools which consists of an Adz
306 made of blue Stone, a Shark's Tooth fastened to the end of a Stick for a graving Tool, and Files and their Jewellery, such as Necklaces of
237 various Sorts, some made of small shells of various colours & prettily disposed, others of the Legs of fowls, which however odd they may Sound, these people contrive to make into ornaments for their women's Necks and are no bad ones.

501 Their Canoes are of two Sorts, double & single and of a very curious construction & well finished & must cost them much Labour, they consist of several pieces of plank very ingeniously adapted to each other & sewed together on the inside of the Canoe; the single ones are in general large enough to hold six people, have an outrigger to them & are covered over with a deck at the Head and Stern under
[531] which they stow the different articles they carry in them. On these decks they fasten 10 or a dozen white Shells as ornaments & at the stern there is a Support for a fishing rod which they generally carry along with them. The double or sailing Canoes are built large & strong with a Stage, on which a Hut is built. Some of them are capable of carrying 80 or 100 Men & can keep the Sea a long time
[285] in these Latitudes. Their Sails are made of strong Matting & have
[531] generally the Image of a Cock upon them.

Their musical Instruments consist of a Flute, a small instrument
534 called by the Natives Meemeeah,[3] and Drums. The Flute is made
[824]

[1] Tou, *Pipturus argenteus*; or Fau, *Hibiscus tiliaceus*.
[2] It is hard to guess what Samwell means by this—perhaps the top edge of some baskets, like an immense saw-tooth.
[3] *mimiha*, Pan-pipe.

[455 cont.]
175 We likewise
534 found a new musical instrument, consisting of eight, nine, or ten
[283] slender reeds, about nine inches long, joined to each other by some
fibres of coco-nut core. The length of its reeds [456] seldom varied
much, and the long and short ones were placed promiscuously; a
notch was formed at the top of each, and the method of playing was
only to slide the instrument backwards and forwards along the lips.
It had commonly not above four or five different notes, and we never
[171] met with one which included a whole octave. Its resemblance to the
syrinx, or Pan's flute of the civilized Greeks, dignified it much
175 more than any music which it contained. From the method of playing
533 it, the lovers of music will easily conceive that this divine art
[184] is entirely in its infancy among the inhabitants. The vocal part,
which is the same as we had already observed it at Ea-oowhe, is very
far from being unharmonious, and the women beat time to it by
smapping their fingers very exactly; but its whole extent is only of
175 four notes, and therefore cannot admit of any variety. They had like-
534 wise a flute of a bamboo-reed, nearly of the thickness of a German
171 flute, which they played with the nostrils, like the Taheitians.
175 They commonly had ornamented it with various little figures, burnt
53 in, and pierced four or five holes in it, whereas the Taheitian flute
322 had but three in all. The method of ornamenting wood by burning
[534] figures into it, was frequently observed in their bowls and various
171
[415] other utensils.

175 It was near sun-set when we returned on board with our collection,
609 and found the vessels still surrounded by many canoes, and the natives
[83] swimming about extremely [457] vociferous. Among them were a considerable
171 number of women, who wantoned in the water like amphibious creatures,

[460 cont.]

175 501 construction. The common small trading-canoes were sharp-bottomed, and ended in a sharp edge at each extremity, which was covered with a board or deck, because their narrow form frequently exposed these parts to an entire submersion, which would have filled them with water without this precaution. They commonly had a slight out-rigger or balancer, [283] made of a few poles, to pre- [461] vent their oversetting. The body of the canoe consisted of several planks, of a hard brown wood, sewed together with strings made of the fibrous coco-nut core, and so artfully joined [171] that they appeared to be remarkably tight. The Taheitians simply bore holes in each plank, through which they pass their strings; but by this means their canoes are always leaky. At Tongo-Tabboo they dub the inside of the plank in such a manner as to leave a projecting list or rim close to the edge, and through this they pass their threads. Along the deck or narrow board at each extremity are placed seven or eight knobs, which seem to be an imitation of the little fins, (pinnulae spuriae) on the belly of bonitos, albecores, or mackarels: and I cannot but conjecture that the natives have taken these swift fishes [412] for their models in the construction of their boats. Though these [237] canoes are commonly fifteen or eighteen feet long, yet they are as neatly and smoothly polished as our best cabinetwork, which must appear the more surprising when we consider that the tools of the natives are [171] only wretched bits of coral, and rasps made of the skins of rays. Their paddles were equally well polished, of the same wood as the canoe, and had short rhomboidal broad blades, like those of Taheitee. The other sort of canoes were constructed for sailing, and persons skilled in nautical matters acknowledge that they were admirably well adapted for [171] this purpose. We saw one of them in Maria Bay, consisting of two joined

[185 cont.]

501 tranverse platform of planks, in the midst of which they had erected
175 a hut, where they placed their goods, their arms, and utensils, and where they passed great part of their time. There were likewise holes, which gave admittance into the body of each canoe. Their masts were stout poles which could be struck at pleasure, and their sails were very large and triangular, but not very proper to sail by the wind.
[289] All their cordage was excellent, and they had also contrived a very good ground tackle, consisting of a strong rope with large stones at the end, by means of which they came to an anchor.

122 We went on shore again after dinner, as captain Cook proposed
126 leaving this island the next day. We passed through several fields and wild shrubberies, and collected a number of valuable plants.
[439] We also made a purchase of several arms, such as clubs, and spears, and of some utensils, viz. small stools, large wooden dishes and bowls, in which the people prepare their victuals, and some earthern pots
719 which seemed to have been long in use. The great abundance of their
175 arms, does not agree with their good-nature and hospitable disposition,
[181] unless they quarrel with their next neighbours, like the people of
[531] Taheitee and the Society Islands. But they seemed to have spent too much time [186] in ornamenting their clubs, to have frequent occasion to use them.

122 At day break the next morning [June 29] we unmoored and set sail, standing towards the island of Tofooa, on which we had again observed
439 the volcano burning during night. A whole fleet of canoes followed us
175 several miles, trading with a variety of articles, particularly their dresses, utensils, and ornaments. Some of them likewise brought fish of different sorts, which we had found very well tasted.

76: Yuncker N-4,5 (1953) 1959 OU9 Tonga OU9

C. nucifera is cultivated throughout the world in tropical countries for its many useful properties. Copra, the dried flesh of the seed, is the most important export crop of Tonga. Large plantations of coconut are located on all of the main islands. Trees also grow spontaneously outside of cultivation.

Tongan name: *niu*. The following varieties are recognized:

Niu kafa: fruit is large and long, but nut is very small; husk fibers are used in making a type of cordage called *kafa*.
Niu kula: fruit is very small, scarcely more than 3 inches long, containing little or no liquid, cavity being filled with white pulp or jellylike substance.
Niu leka: very slow-growing variety.
Niu matakula: base of fruit where stalk joins is red.
Niu mea: fruit is yellowish in color.
Niu mealava: fruit-stalk scar has a red ring surrounding it.
Niu ta'okave: fruits are very small, some yellow and some green.
Niu tea: fruit is pale green.
Niu 'ni: fruit is green.
Niu 'utongau: fruit is mostly green, husk sweet and edible.
Niu tui: fruit is very large, mostly green but sometimes yellow.

Family Araceae

Genus **Epipremnum** Schott

Epipremnum pinnatum (Linnaeus) Engler, Pflanzenr. 37 (IV. 23B): 60, 1908.

High-climbing, much-branched, coarse, subherbaceous vine. Leaves alternate, ovate-oblong, acuminate, base rounded to cordate, entire, variously perforated with large holes, or larger leaves pinnately divided nearly to midrib into numerous oblong lobes, up to 40-60 cm. long. Flowers small, crowded on a cylindrical, fleshy spadix 2-3 cm. thick and 8-10 cm. long, spadix subtended by a leaflike, lanceolate spathe as long as, or longer than, spadix.

Tongatapu: in forest near sea below Fu'amotu village, Mar. 4, 1953, *Yuncker 15172*.

'Eua: *Lister;* in dense forested ravine north of Fuai. Mar. 19, 1953, *Yuncker 15369*.

Vava'u: near summit of Talau, west of Neiafu, May 24, 1953, *Yuncker 16158*.

Common throughout Tonga in forested areas. Burma to the Philippines and Polynesia.

Raphidophora pertusa var. *vitiensis* Engl. in Hemsley's list.

Tongan name: *alu*.

The long slender stems (called *kaho alu*) are used in the weaving of baskets.

Genus **Colocasia** Schott

Colocasia esculenta (Linnaeus) Schott, Melet. Bot. 1: 18, 1832.

Acaulescent, tuber-forming herb. Leaves ovate-cordate, peltate, entire, acute to acuminate, of various sizes but mostly 30 cm. or more long, petiole sheathing at base. Flowers small, on a fleshy spadix surrounded by a yellowish or reddish spathe.

76: Yuncker N-4,5 (1953) 1959 OU9 Tonga OU9

Genus **Crinum** Linnaeus

Crinum asiaticum Linnaeus, Sp. Pl., 292, 1753. 137

Coarse, bulbous herb. Leaves numerous, oblong, straplike, acute, up to 2 m. long or more and 25 cm. wide, fleshy, clasping at base. Flowers numerous, at top of fleshy scape, white, fragrant, perianth tube up to about 10 cm. long, filaments white, styles purplish.

Niuatoputapu: in grassy area near old well in Hihifo, Dec. 7, 1951, *Hürlimann 399*.

Occasionally cultivated as an ornamental throughout Tonga. A southern Asiatic species now widely cultivated in warm climates. [247] [824]

Crinum pedunculatum R. Brown, Prodr. Fl. Nov. Hollandiae, 297, 1810.

Fleshy, bulbous herb. Leaves fleshy, numerous, up to 1 m. or more long and 10 cm. wide. Flowers numerous, umbellate at top of stout, solid, fleshy scape, perianth tube green, up to 10 cm. long, with linear, white segments up to 5 cm. long.

'Eua: *Lister*.

An Australian species now widely cultivated as an ornamental. [247] [824]

Genus **Furcraea** Ventenat

? **Furcraea gigantea** Ventenat, Soc. Philom., Bull. 1: 65, 1793.

Coarse, short-stemmed plant. Leaves nearly flat, spreading rosette fashion from short stem, linear-lanceolate, up to 1 m. or more long, fleshy, margin armed with strong, recurved teeth, apex acuminate and ending in a short, sharp spine. Flowers white, commonly replaced by bulbils, in large, terminal, paniculate clusters.

Tongatapu: forming a colony along side of trail below Ha'akame village, Mar. 12, 1953, *Yuncker 15287*.

Introduced for the fibers obtained from the leaves and used in cordage. Now established locally. [283] [824]

Tongan name: *fau'malila*.

FAMILY TACCACEAE

Genus **Tacca** Forster

Tacca leontopetaloides (Linnaeus) O. Kuntze, Rev. Gen. Pl. 2: 704, 1891.

Herb, up to 50 cm. or more tall. Leaves radical, large, palmately three-parted, each division in turn deeply lobed and divided into acuminate lobes and teeth, petioles up to 60 cm. or more long. Flowers pendent, greenish, numerous, in umbellate clusters at top of a hollow, bracteate scape sometimes up to about 1 m. tall; fruit globose, ribbed, fleshy, yellowish when ripe, crowned with withered floral parts. Tubers up to 8-10 cm. in diameter, sometimes larger under cultivation.

Tongatapu: *Moseley;* in calcareous soil in thicket near shore, Sopu, Feb. 25, 1953, *Yuncker 15004*.

'Eua: in border of pastured land near center of island, Apr. 5, 1953, *Yuncker 15639*.

76: Yuncker N-4,5 (1953) 1959 OU9 Tonga OU9

eastern ridge, Mar. 20, 1953, *Yuncker 15559;* on limestone cliff facing sea, near summit of eastern ridge, about middle of island, Apr. 8, 1953, *Yuncker 15687.*

Local in distribution in Tonga. Society Islands, Samoa, Niue, Melanesia and westward to Java or beyond.

Elatostemma sesquifolium Hassk. of Hemsley's list, based on a specimen collected on 'Eua by Lister, is presumably referable to this variety. Schröter (Fedde Repert. Sp. Nov. 45 : 265, 1938) so cites a Lister collection from 'Eua.

Genus **Pipturus** Weddell

Identifications of *Pipturus* are by **Carl Skottsberg.**

Pipturus argenteus (Forster f.) Weddell var. **lanosus** Skottsberg, Acta Horti Gothob. **7** : 62, 1932.

Small tree, up to 8 m. or more tall, young growth rather densely white-pubescent. Leaves alternate, oval-ovate, acuminate, base obtuse or abruptly acute, up to 15 cm. long and 8 cm wide, serrate, three-nerved from base, midrib branched upward, green above, white-woolly beneath, petiole slender, up to 8 cm. long. Flowers greenish white, in few-flowered, headlike clusters scattered along slender, axillary peduneles; fruit fleshy.

Tongatapu: *Forster;* in clearing along trail below Nualei, Mar. 9, 1953, *Yuncker 15225.*

'Eua: border of cliff on windswept limestone rocks near center of eastern ridge, Nov. 9, 1951. *Hürlimann 211;* in deep ravine short distance northeast of Ohonua village, Apr. 2, 1953, *Yuncker 15614;* on seaward face of limestone cliff on eastern ridge, Apr. 8, 1953, *Yuncker 15682.*

Kao: on rocky slope in open forest, May 6, 1953, *Yuncker 15879.*

Vava'u: *Lister;* near upper rim of limestone coastal cliff along northwestern side of island, May 25, 1953, *Yuncker 16162.*

Niuafo'ou: in crevice of 1946 lava flow along way to summit of main central crater, May 16, 1953, *Yuncker 15998.*

Tafahi: on rocky, volcanic soil, beside path from township of Tafahi to the Piu 'o Tafahi, Dec. 10, 1951, *Hürlimann 403;* on steep slope above northeast coast near northern end of island, Dec. 17, 1951, *Hürlimann 599;* on rocky volcanic soil, steep slope beneath township of Tafahi, Dec. 13, 1951, *Hürlimann 481.*

Niuatoputapu: bush forest on volcanic rock soil, on mountain range, eastward of Vaipoa, Dec. 5, 1951, *Hürlimann 364.*

Frequent on cliffs and rocky areas throughout Tonga. Also in Samoa and Rotuma.

Presumably, this is the *P. argenteus* Wedd. of Hemsley's and Burkill's lists.

Tongan names: *olonga, tou.*

A cordage fiber is obtained from the bark, and the bark and leaves are used in the preparation of medicines.

76: Yuncker N-4,5 (1953) 1959 OU9 Tonga OU9

about 7 mm. long, short-pedicellate, in few-flowered, short, axillary, racemose clusters; pods 2 cm. or more long, thin, red brown. 137

Tongatapu: edge of mangrove swamp, Nuku'alofa, *Setchell and Parks 15326.*

Nomuka: in thicket along road encircling island, Apr. 30, 1953, *Yuncker 15839.*

Vava'u: *Crosby.*

Occasional in strand thickets. India, southern China, New Guinea, Australia, Mariana and Caroline Islands, Philippines, Fiji, and other islands.

Probably the *D. monosperma* Dalz. of Burkill's list.

Tongan name: *moho.*

The seeds, which are said to be poisonous, are used as beads. [301] [824] [278]

Genus Derris Loureiro

Derris trifoliata Loureiro, Fl. Cochinchinensis, 433, 1790.

Glabrous, scandent shrub, with rather large, scattered lenticels, climbing to 5 m. or more high. Leaves alternate, odd-pinnate, leaflets three to seven, elliptic or oblong-subovate, acuminate, base obtuse, variable in size, up to 10 cm. or more long and 4 cm. wide, somewhat glossy, petiolules 5-8 mm. long. Flowers white to rose, up to 1 cm. long on short, slender pedicels in axillary, racemose, or paniculate clusters; pods one- to two-seeded, conspicuously veiny, subrhomboid to broadly oblong, up to 5 cm. long and 3 cm. wide.

Tongatapu: *U.S. Expl. Exped.;* toward beach near Fatai, Oct. 30, 1951, *Hürlimann 51;* in thicket near the beach, Sopu, west of Nuku'alofa, Feb. 25, 1953, *Yuncker 15015.*

Vava'u: *Crosby.*

Occasional near the beach. Tropical Africa, Asia, Malaya, Australia, and Polynesia.

D. uliginosa Benth. in Hemsley's and Burkill's lists.

Tongan name: *kavahaha.*

The stem fibers are strong and are used for cordage. An extract of the roots is used as fish poison. [283] [226] [824]

Genus Inocarpus Forster

Inocarpus edulis J. R. and G. Forster, Char. Gen. Pl., 66, 1776.

Rather large tree, up to 12 m. or more tall. Leaves alternate, oblong to elliptic-lanceolate, entire, obtuse or bluntly pointed, base cordate, coriaceous, pinnately nerved, strongly venulose, coriaceous, up to 30 cm. or more long and 10 cm. wide, petioles stout, scarcely 1 cm. long. Flowers yellowish white, 1 cm. or more long, sessile, in spicate, pubescent clusters; fruit fleshy, rounded, 6 cm. or more long, edible.

Tongatapu: *Graeffe; Moseley;* in plantation near Nualei, Nov. 1, 1951, *Hürlimann 118;* in forested area near Lavengatonga village, Mar. 6, 1953, *Yuncker 15180.*

76: Yuncker N-4,5 (1953) 1959 OU9 Tonga OU9

137 *G. mallococca* L. f. in Hemsley's and Burkill's lists.

Tongan name: *fo'ui.*

[8 24] [313] [283] The timber[1] is used for banana shooks and the bark fibers for cordage.

Grewia prunifolia A. Gray, U.S. Expl. Exped., Bot. 1: 199, 1854.

Shrub. Leaves alternate, ovate or lanceolate, acuminate, base rounded, 5-8 cm. long, finely serrulate, three-nerved from base, midrib pinnate above, glabrous, petioles scarcely 1 cm. long. Flowers one to three on short, axillary peduncles, less than 1 cm. wide; fruit four-lobed, somewhat hirsute.

Tongatapu: *Moseley.* Also in Fiji.

Genus **Triumfetta** Linnaeus

Triumfetta bartramia Linnaeus, Syst., ed. 10, 1044, 1759.

Densely stellate-hairy, half-woody, branching, shrublike plant up to 2 m. or more tall. Leaves alternate, round-ovate, mostly three-lobed, lobes acuminate, serrate, base rounded, cordulate, up to 8 cm. or more long and 7 cm. wide, palmately five- to seven-nerved, petiole slender, up to 6 cm. or more long. Flowers small, yellow, in compact, axillary fascicles; fruit subglobose, about 5 mm. in diameter, covered with hooked bristles.

Tongatapu: waste area near Blow Hole area below Houma village, June 1, 1953, *Yuncker 16218.*

Lifuka: old plantation near southern end of island, Apr. 28, 1953, *Yuncker 15786.*

Vava'u: *Crosby.*

Tafahi: plantation above township of Tafahi, alt. 70 m., Dec. 15, 1951. *Hürlimann 526.*

Frequent as a plantation and waste-area weed throughout Tonga. Pantropic.

T. rhomboidea Jacq. in Burkill's list.

Tongan names: *mo'osipo, mo'osipo enge'enga.*

Triumfetta procumbens Forster f., Fl. Ins. Australia, Prodr., 35, 1786.

Prostrate, semi-woody plant with long, trailing, densely stellate-pubescent branches. Leaves simple, alternate, round-ovate in outline, rounded-cordate at base, commonly three-lobed, lobes obtuse, crenate-serrate, up to 6 cm. or more long and as wide, palmately five- to seven-nerved, petioles as long as or exceeding blade. Flowers about 1 cm. long, yellow, in axillary, pedunculate, umbellate clusters, fruit globose, about 12 mm. in diameter, covered with pubescent bristles.

Tongatapu: *Mathews; Home; Graefe;* in sand near sea below village of Fu'amotu, Mar. 4, 1953, *Yuncker 15165;* on sand at upper edge of beach below steep cliff near Haveluliku village, June 3, 1953, *Yuncker 16234.*

'Eua: pioneering in sand, margin of seaside thicket just above high-tide limit, Ha'aluma, Apr. 1, 1953, *Yuncker 15601.*

Vava'u: *Crosby.*

Tafahi: on shore below township of Tafahi, Dec. 13, 1951, *Hürlimann 492.*

1 /Grewia crenata -- Analyst/

76: Yuncker N-4,5 (1953) 1959 OU9 Tonga OU9

137 215 824

Occasional in villages as an ornamental. A native of tropical Africa now widely cultivated in warm countries.

Hibiscus syriacus Linnaeus, Sp. Pl., 695, 1753.

Erect, branching, glabrous shrub 2 m. or more tall. Leaves rhombic-ovate, alternate, lower ones often three-lobed, toothed, acute to acuminate. Flowers up to 8 cm. wide, red or purplish, solitary in leaf axils on current season's growth; fruit ovoid, up to 2.5 cm. long.

Introduced ornamental. Occasional. A Chinese species now of worldwide cultivation in tropical and temperate countries.

Hibiscus tiliaceus Linnaeus, Sp. Pl., 694, 1753.

Tree up to 8 m. or more tall with glabrous or somewhat pubescent, spreading branches. Leaves round-ovate, abruptly acuminate, base deeply cordate with a narrow sinus, up to 15 cm. or more long and nearly as wide, palmately seven- to nine-nerved, glabrescent above, paler and densely stellate-pubescent beneath, petioles up to 12 or 15 cm. long. Flowers up to 10 cm. wide, on short, axillary and terminal pedicels, corolla yellow with darker eye, turning salmon red; capsule pubescent, five-celled, several-seeded, seeds glabrous.

Tongatapu: thicket near beach, Sopu, west of Nuku'alofa, Feb. 25, 1953, *Yuncker 15027.*

'Eua: *Lister;* in thin forest below Fuai plantation, near center of island, Mar. 19. 1953, *Yuncker 15358.*

Lifuka: in seaside thicket just above high-tide limit, north of Pangai village, Apr. 25, 1953, *Yuncker 15742.*

Vava'u: *Harvey; Crosby.*

Tafahi: coastal forest, below township of Tafahi, Dec. 13, 1951, *Hürlimann 490.*

Frequent throughout Tonga, usually near the shore. Pantropic.

Tongan name: *fau.*

824 293 313 278 757

The bark fibers are used in making cordage, mats, *tanvale,* kava filters, and so forth. The wood is used in general construction work and fences: the bark and young leaves, in the treatment of skin diseases.

Genus **Thespesia** Solander

Thespesia populnea (Linnaeus) Solander, ex Correa, Mus. Nat. Hist. Nat. Paris, Ann. 9: 290, 1807.

Medium-sized, round-topped tree, the young branches brown-scurfy. Leaves simple, alternate, somewhat fleshy, ovate, acuminate, base cordate with an open sinus, entire or rarely somewhat lobed, palmately five- to seven-nerved, up to 12 cm. or more long and 10 cm. wide, petioles up to 10 cm. or more long. Flowers up to 8 or 10 cm. wide, solitary, on stout, axillary pedicels, corolla yellow with reddish center, changing to purple with age; capsules depressed-globose, about 2.5 cm. in diameter, seeds 10, hairy.

Tongatapu: seaside thicket near Niutoua village, Feb. 27, 1953, *Yuncker 15107.*

1 /Hibiscus schizopetalus -- Analyst/

77: Whitcombe Y-3 (no date) 1930 OU9 Tonga OU9

were throwing a stone. The end of the *fau* bark held in the hand is released and the arrow shoots off to a great distance.

A bow and arrow game, *gahau*, is played with a very slender, supple *kaho* stick. The bow is made from a stout orange stick.

For the boys' game of *maka ta*, an implement very much like the modern slingshot is used. The bark of tapa or *fau* is used for the sling and a small pebble for ammunition. The sling is swung around the head full force, and the pebble thereby released and shot out into the air.

A Tongan dance (*lakalaka*) may be performed by any number of people of both sexes. The leader (*bunake*), composes the dance, teaches it, and leads the dancers. He chooses leaders (*vahegas*) for both the men's and women's parts, who must be of chiefly rank, as no one considers the *lakalaka* worth watching unless the *vahega* belongs to the family of a chief. The words and music (*hiva usu*) for the *lakalaka* have been handed down from early times.

The *fahaiula* is a dance participated in by women only. The dancing is done to the sound of drums, with groups of girls sitting around singing and clapping hands to keep time for the dancers.

A game for small children (*aamoa*) is played by ten or more little girls and an old woman. The old woman covers herself with a piece of *gatu* or tapa cloth and tries to frighten the children, who run to escape her.

The game *fisi* is for both sexes. A rolled mat (*tapakau*) is placed on end with a stick on either side to support it; the children have small dried pieces of dried *fau* wood which they try to send over the top of the mat with one sharp clip of the finger.

CLOTHING OF WOMEN

The material used in most of the clothing worn by Tongan women in the early days was made from *feta'aki* (white tapa cloth before it had been dyed or printed). The leaves of certain trees were also used, coconut fiber serving as thread for sewing them together.

Funeral garments were made from leaves blackened by several days' exposure to the sun. These leaves were sewed together with a needle made from the small rib of the coconut leaf, the bark of the *fau* tree serving as thread.

A more modern method of dyeing the tapa cloth for funerals is as follows: The natives gather a great pile of candle nuts (*tutui*),

/130 cont./

342 at that time). They have apparently been built in Tonga since the turn of the century.

342 For 33 of the European-type rectangular houses in 'Uiha/'Uiha and
179 for 21 of these in Fungamisi/Vava'u, the following building costs /sic/ were obtained:

	in 'Uiha	in Fungamisi
built between 1890 and 1900.....	1	1
1900 " 1910.....	17	3
1910 " 1920.....	4	5
1920 " 1930.....	2	3
1930 " 1940.....	2	3
1940 " 1950.....	4	2
1951.....	3	4

342 The "ancient Tonga-style" houses hitherto mentioned do not
178 correspond exactly in their construction to the model of old times.

Their construction (framework) in part resembles that customary in former times. Not only in some houses covered with indigenous
[284] material, but especially in those covered with corrugated metal, one
[283] often finds a strong and carefully constructed framework with lashings of coconut-fiber cord.

94 dwellings (of commoners) with ancient Tongan ground plan were examined in 1952 in 'Uiha/'Uiha.

3 of these had a "very good" construction which approximately corresponds to the kind described in the old sources (insofar as these give more detailed information on the subject); /131/ only the beams were no longer polished (smoothed over) with the former meticulous care and the lashings perhaps somewhat simpler. These houses were built around 1880, 1931 and 1933, according to the memory of the natives (The 1931 building was first used as a church, then as a dwelling.

44 had a construction much like the ancient Tongan, and can be described

/136 cont./

412 and make the handle themselves (length 85-90 centimeters) out of wood
[824] of the toa tree (Casuarina equisetifolia L.).

There are various transverse hatchets; the iron blades are bought
[177] and then hand-shafted as desired. To make a fale-vatu lahi the
[439] natives like to take an ordinary European hatchet blade of the type
[824] which was formerly traded in Tonga by German commercial firms, and provide it with a forked-branch shaft of the feta'u tree (Calophyllum
[284] inophyllum). The blade which lies crosswise is fastened (lashed) with
[283] coconut-fiber cords (kafa) that are drawn through the eye (provided for the handle by the European factory). The blades necessary for such
[439] transverse hatchets can at present no longer be bought from merchants in the Archipelago; the ones in use, which some of their present owners have inherited from their grandfathers, are therefore

[284]

Transverse hatchet (fale-vatu)
with European blade (Expedition Collection, No. 102)

of special value and handled with great care. Sometimes the rear abutment on the shaft, which has to absorb the blow, is protected against splintering by having some six nails driven in. In a typical specimen of the fale-vatu lahi, the measured length of the blade was 18 centimeters and the maximum width 15 centimeters, the length of the handle
[342] was 47 centimeters. In house-building, longitudinal grooves are cut
[335]

/139 cont./

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197
436 (Fungamisi). As a result of the growing use of European building materials for the old-style Tongan houses and especially as a result of the introduction of the European-style houses, however, money takes on an increasing importance for the procurement of material in house building.

342
423
425 A Tongan who plans to build a house must of course, decide where it is to be located. If he has not yet obtained property in the village (api kolo) (371)

371. See p. 173.

from the government and does not wish to build on the property of a relative, he must hand in a proper request to the authorities for the
342 assignment of a plot of land. Meanwhile he will soon start building preparations, for these take a fairly long time. The preparations--as in former times--consist chiefly of procuring the building material and obtaining food supplies to feed the workers.

342
283
824 /140/Making sufficient quantities (several thousand meters) of coconut-fiber cord (kafa) for lashing the framework and for fastening the coconut-leaf covering is still an important prerequisite for building a dwelling in ancient Tongan style. The natives gather large
283 coconuts with especially long husks (niu kafa), remove these and divide them into four (eight) pieces which they place in a basket weighted with stones and lay in a shallow place in the sea for about a month. Then they beat them on a block of hard wood (or on a stone) with a stick or toa wood 30 to 40 centimeters long, in order to loosen the fibers and remove the crumbly material between them. After the fibers have been dried in the sun they are rolled in small bundles (372)

372. From 5 to 25 fibers each, depending on their thickness.

with the palm of the hand on the naked thigh (or between two palms),

/140 cont./

283 and then the three-strand cord is plaited from these small bundles. This method of preparation probably corresponds to the ancient Tongan procedure except for two deviations: In the old days it was probably generally customary to "bake" the coconut husks in an earth oven and only then to place them in the sea; occasionally this complicated method is still used today by leaving the husks (wrapped in koko leaves) (373)

373. Bischofia javanica Bl.

for hours or days (up to one month) in the earth oven--soon grown cold--and thereafter keeping them in sea water for two or three weeks. Secondly, in former times, the natives probably wound the little fiber bundles with a single fiber before plaiting them, as is occasionally still done in Samoa; this procedure is slower, but guarantees greater durability of the cord.--Making coconut cords is men's and women's work, but is done mostly by the men. Often, several men do the plaiting together, and they also like to do this work in the kava gatherings. However, the cords are much less often made than they were even a few decades ago when one constantly saw men plaiting kafa in the kava circles. In those days they apparently also liked to lay in a supply, and the demand for better built houses of ancient Tongan style was probably greater. Today, three men plait up to 200 meters of coconut-fiber cord in four hours (as a day's output). In this way three people can, in three months, make the necessary amount of kafa for a rather large house of ancient Tonga style, whereas they finish this work for a small house in less than a month--if they persist in plaiting their quota every day.

A further concern of the Tongan who wants to build a house in the old Tongan style is to procure the posts and beams. The Tonga Islands are poor in lumber, and if a person does not have a few koka

/141 cont./

342 For a long time the "district officer" /cited in English/
197 living on Nomuka has wanted to move out of the house of his parents-
198 in-law and build his own house on a property he owns in the village.
463 He talks over his plan with Vilingia, the (approximately 45-year-old)
331 house-building specialist on Nomuka, who has been trained in Fiji as a carpenter. They decide to build a house with ancient Tongan ground plan but with "improved beaming," wooden walls with a cement base, windows and doors and a corrugated sheet metal roof. Vilingia draws a construction plan in an exercise book. The district officer
[439] buys four metal drums of cement, Canadian building timber, corrugated sheet metal and nails, flour, fat and sugar in Nuku'alofa and has the supplies brought to Nomuka in cutters. Six men from Nomuka sail to
[484] the uninhabited island of Tonumea, a half-day's journey distant, there
[313] chop down 12 breadfruit trees, cut them up as beams and take them
[283] home. Coconut-fiber cord is also made in sufficient quantities. After all the material has lain ready for several weeks, the district officer decides to start the building. Shortly before the date fixed,
[251] a group of natives sail to the neighboring island of Nomuka Iki, there shoot one of the half-wild cows of the "boss," cut it up properly and, in Nomuka, salt down the meat in wooden tubs, under the supervision of an aged Tongan.

342 On the day the building is to commence, some 20 men from the
476 village (young and old in approximately the same number) assemble early
313 in the morning at the previous dwelling of the "boss," and, after a
331 breakfast of fried cakes /cited in English/ (Tonga: keke) and orange-leaf tea, they repair to the plantations, led by the carpenter Vilingia, where, because of the exalted position of the "boss," they take the liberty of selecting and cutting down the coconut palms needed for the rafters, without asking permission from their respective

513 /146 cont./
352
178

383. These are no longer made in Tonga and are mostly several decades old.

are the "headrests" (tekihi) made of a simple, angular or rounded oblong block of wood, or the kali papa nailed together out of scraps
513 of imported building timber. However, the majority of Tonga today
178 sleep without headrests; they sleep on the level ground or put their
177 heads on a cloth bundle or on a European pillow that they have made
352 themselves and filled with kapok. In some 30 to 50 percent (384)
177

384. Depending on the location of the settlement (village near a seaport or remote island).

of Tongan houses there are European-type bedsteads (wooden or iron
[283] bedstead or camp bed). Some of the wooden bedsteads were self-made by the natives; on a lacing of coconut-fiber cords (kafa) lies a pile of mats serving as mattress. The beds found in Tongan houses are,
[513] however, only partly used for sleeping (with European linen or a bast-fabric sheet over the mat pile and with a pillow); more as a useful object for storing some of the delicate mats. In some houses today one
751 sees mosquito netting.

285 Baskets are plaited in large quantities in Tonga. (385)

385. See p. 313 ff.

However, today they serve more for carrying than for storing things in
[531] the house. The wealth of baskets has diminished insofar as the /147/
[237] artistic coconut-fiber baskets, for example, (386)
[178]

386. See W. Ellis, An authentic narrative... /cited in English/ I. p. 108; J. Cook, Beschreibung... loc cit. VI. p. 283; also No. Oz. 139 (Cook Collection) in the Institute for Ethnology, Gottingen.

partly decorated with small shell disks, have not been made for a long
285 time. The baskets made today in Tonga consist mostly of pandanus-leaf
531 strips (of several species) in various forms (some using coconut-leaf ribs) (387)

/162 cont./

245 huo spade they dig holes approximately 50 centimeters deep (diameter 25 to 30 centimeters) in which they plant a sprig (root sucker). They fill the plant hole with earth so that a depression remains in which water from rainfalls can accumulate. The distance between plants is about five meters on a flat area. Every three weeks or so they remove the proliferating weeds with the huo lafa-lafa. After six to nine months the first fruits can be harvested.

niu = Coconut Palm (Cocos nucifera L.)

824 178 Since the settlement of the Archipelago the coconut palm has played a very special role in Tongan culture. At the present time in particular, in view of its extraordinarily manifold uses, (426)

426. The following list will show the all-purpose uses of the coconut palm in Tonga; ("old") and ("new") indicate whether or not its utilization was already common in ancient Tonga.

[262] [252] [231] [303] [372] 1. The meat of the nut (kakano 'i niu): eaten in pieces by the natives (old); grated (or squeezed out as coconut milk) for preparing foods and beverages (old); grated to feed chickens and pigs (old), used in pieces to feed pigs (old) and horses (new); used for making copra (new); the oil obtained from the meat is used to make hair oil and body oil (lolo Tonga) (old), to fry in a pan (new) and to burn as fuel in the absence of petroleum imports (old).

[272] [262] [264] 2. The water of the nut (huhu'a oe niu): especially of unripe nuts is drunk by the natives (old); in an unripe nut it is stirred together with the meat and eaten (old); used at meals to wash one's fingers (old).

[415] [372] [524] 3. The hard shell (Endocarpium) of the nut (nge'esi niu): used for making drinking mugs (old); as fuel (old) and (as charcoal) to heat flat irons (new); used as a child's toy su nge'esi niu ("coconut shell shoes," see p. 272 (new).

[283] 4. The husk (Mesocarpium) of the nut (pulu): used to make cord (kafa) for house and boat building, for fastening blades to tools etc. (old); used as cover for hatchets

/180 cont./

227 178 824 however,--usually of fau (Hibiscus tiliaceus) wood--is still made exactly as it was in olden times. In the uloa community fishing expedition they use the heavy net plaited of coconut fibers, as they always have, since the available hemp material seems to be too weak [177] for this purpose. However, the long rope required for this procedure [283] is scarcely plaited any longer of the fau bast; they buy an imported 227 European rope. The fish spears today have iron points with barbs; 177 they buy the prongs ready-made from a shopkeeper or have them made by 178 a blacksmith in one of the chief towns. The points are inserted in the spear shaft and fastened with a wrapping of European fishline. [824] [283] The ancient Tongan fishlines plaited of coconut fibers (466)

466. See, for example, J. Cook, Beschreibung... loc. cit. VI. p. 286.

have long since disappeared. Today the natives use the European [237] lines available in quantities from shopkeepers, just as they use exculsively the steel fishhooks introduced by whites and have apparently forgotten the traditional, beautiful hooks of tortoise shell and mother-of-pearl. (467)

467. Ibid.

226 417 177 Benzol pressure lamps have largely replaced the torches formerly cus- 227 tomary in night fishing. The traps (finaki) on many islands are already made more often of wire netting than of the roots of coconut 177 palms, and there is scarcely a Tongan who goes to the trouble of making [824] the weirs (pa) of bamboo and plaited coconut palm leaves, but generally uses wire netting for this purpose as well. Finally, some of the 501 178 177 boats used in fishing are still the traditional outriggers (popao, rarely tafa'anga) (468)

468. See p. 349 ff.

but some are also rowboats and European-type sailboats which have re=

/211 cont./

285 (824) (531) and from narrow pandanus leaf strips of the lou tofua species (see above) in a spiral coil technique. "Geometric" patterns are worked in with black dyed (see above) lou tofua strips and natural colored lou paongo strips.

/212/

kato lou kie:

(482) This small pouch with a handle is used to hold money, tobacco, matches, etc. It is carried only by women and girls who like to take it along when they go shopping.

The kato lou kie is plaited by women and girls from pandanus strips (upper skin) of the lou kie species, (555)

555. See ta'o-vala kie, p. 309-310.

some of which are dyed with European colors.

kato alu:

(585) The kato alu is a "wedding basket" for a wedding of some importance in ancient Tongan style. (556)

556. See p. 114-116.

There are two shapes: a smaller, oval one for the bridegroom and a larger, round one which was originally intended for the bride.

(462) (824) These baskets, which are made only by women, are plaited with the separated midribs of the pinnate leaflets of the coconut palm and the split leaf ribs of the creeper alu. They are dyed with a (386) mixture of the soot of burned Aleurites and the sap of the koka tree (Bischofia javanica [flower]). With thin strings twisted from the (283) (237) bast of the paper mulberry tree, small rings cut out of shells (or snail shells [pule] with coconut fiber strings) are fastened to the (283) (237) outer surface of the basket. The carrying cord is plaited out of women's hair.

285 177 178 From the foregoing list of the most important types of baskets we may conclude that the natives expend considerable time, effort and

/215 cont./

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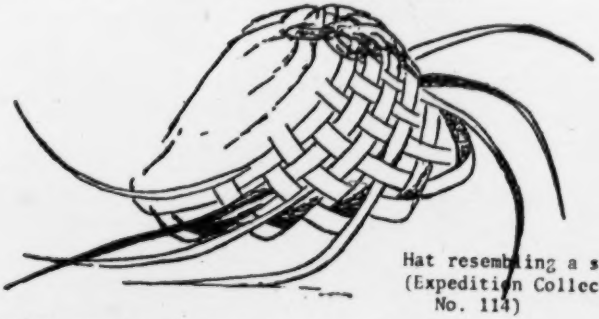
tata fakapolisi: Hat resembling police caps.

helemeti: Hat resembling sun helmet.

These hats and those of other shapes are sometimes quickly plaited by young Tongans on the plantations from halved coconut palm leaves, and are worn as a protection against the sun or as a quaint adornment. They are "inventions" of recent times.

[178]



Hat resembling a sun helmet (Expedition Collection, No. 114)

Typical women's plaitwork is the making of various ornamental belts.

mana fau:

This simplest ornamental belt may be worn on all special occasions (church-going, festival, etc.) by girls and women (and boys) in place of a belt mat (ta'o-vala, see above). Perhaps this bast belt is a recent introduction or a new creation which may, however, be several decades old.

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283
824
[462]

Women and girls make the mana fau from the bast of Hibiscus tiliaceus. With the machete men and women (girls) usually cut several small trunks (some 15 or 20) of this tree which grows only wild; the women (girls) scrape off as much as they can of the outer bark with knives, pieces of broken glass, etc., and place the slender trunks into the sea for two to four weeks; this loosens and make pliable the rest of the bark-bast layer so that it can easily be pulled

/215 cont./

285 283 824 off (all around) in one strip. After it has dried in the sun for about two days /216/ the white bast (= on the inner side of the remaining bark) is removed. This the women (girls) divide into narrow strips and therewith knot the mana fau which is actually only a strand of bast slung around the hips, from which the bast fibers, knotted to it in close succession, hang down to below the knees.

kie-kie lou fau:

292 The kie-kie lou fau is worn especially by women and girls, though sometimes also by men. They wear it instead of a ta'o-vala (764) (574) (535) to church, when visiting chiefs, for festivals and other occasions, and for dances (laka-laka, ma'ulu'ulu, hula hula, tau'olunga, hula, ulu); they also decorate fresh graves with it.

285 292 (462) (824) (283) (177) (386) This ornamental belt which originated only in recent times (end of the last century?/ is made by women and girls, likewise out of hibiscus bast, and consists of a plaited belt cord on which are knotted long, narrow bast strips that hang down. It usually has special knotted ornaments in the hip section (for example, bast strips tied into rosettes), and parts of it, in contrast to mana fau, are always dyed with European dyes (particularly green, lavender, pink, and blue).

kie-kie pueki:

292 (438) This ornamental belt, which is also worn by women and girls (and occasionally by men) in place of the ta'o-vala, is a typical product of the island of Niua Toputapu situated in the very northern part of the Archipelago. It may be an ancient cultural heritage.

292 237 (283) (285) (177) (386) The natives there make the kie-kie pueki, like the mana fau, of hibiscus bast (with long pendant bast strips); all around the hip section, however, they knot snail shells on a band about eight centimeters wide. The snail shells, which are whitish-yellow in their

292 /216 cont./
237 natural state, are today occasionally dyed with European dyes (for
177 example, crimson) for ornamental arrangements.
386

kie-kie lopa:

292 The kie-kie lopa is worn by women and girls (more seldom by men)
[535] as a ta'o-vala; they also like to wear it at dances (laka-laka,
[353] tau'olunga, kailao, hula, ula, ma'ulu'ulu) and often use it to decorate
their dwellings. This may be an ancient cultural heritage. It is
[462] made by women and girls and consists of a plaited cord of bast
[283] (Hibiscus tiliaceus) on which bast fibers are knotted; upon these they
[824] string red lopa seeds (Adenanthera pavonina?). Today the bast fibers
[386] of the kie-kie lopa are also sometimes dyed with European dyes.
[177]

Perhaps the principle of these ornamental belts is an ancient
[283] Tongan cultural heritage. With much love and zeal they are individually
[386] knotted today by women and girls. European dyes are an essential
[177] feature of all of them except mana fau.

The bast cloth (tapa) (567)

287 567. Tapa is actually an incorrect designation,
177 though long since established even for the dyed
[196] and figured bark cloth (more correctly: bast
cloth); in the Tongan language only the non-
dyed edge of the bast cloth is called tapa,
whereas the dyed (figured) bast cloth is called
ngatu.

is still made in the Tonga Archipelago on a large scale, even though the process is very tedious and in part /217/ entails hard work, and European textiles are relatively easily obtainable for the inhabitants of all the islands.

287 As clothing, however, tapa is used only on certain special
292 occasions; (568)
784
198 568. See p. 66 ff.

since the old belief in taboos has been lost, strips of bast cloth are

/222 cont./

287 198 177 [565] production from the supervision of nobles coarsened the results is difficult to say. The old tapa pieces in the Göttingen Institute of Ethnology, (581)

581. That is, Numbers Oz. 575, 578-580; all from the Cook-Forster Collection.

for example, scarcely surpass the products of the present, and though the patterns customary today may seem in part clumsy, yet they show a certain skill and assurance in the decoration of large areas.

287 527 177 The Christianization of the Archipelago has influenced tapa-making insofar as this work, like every other, is laid aside on Sundays and is scarcely done even on Saturdays. (582)

582. On account of preparations for Sunday.

287 461 The Tongan women also try to finish all planned koka'anga work (that is, the pasting and coloring of the large pieces) before the Christmas season; in the new year they gradually start beating feta'aki (raw tapa), and it often takes months before the first koka'anga again takes place.

285 283 287 177 198 In summary we may say about the plait- and knotwork as well as tapa-making of the Tongans that in their use of materials and in their technique they have, to a large extent, preserved their heritage from the past. True, some of it has been lost, new things have arisen, European expedients have gained entrance, and the products of today seem /223/ in part cruder in comparison with ancient Tongan work. Yet one can scarcely spead of an actual deterioration.

In addition to employment of materials and technique, it may be interesting to note the distribution of these products among the Tongan people in the past and at present. In this connection we [565] discover that today a certain quantity of such pieces are to be found in every Tongan household, and that, as a result of the "liberation" of commoners and the attendant "debasing" of types once reserved for

/223 cont./

285 nobles to the realm of the common people, most of the traditional
283
287 plaitwork, knotwork and tapa-making is scarcely less numerous than
178 it was in the past.
177
[565] During the last few decades there seems to have been danger,
especially in and around the harbor towns, that these ancient crafts
285 might be lost. For this reason a course in "Tongan handicrafts"
287 /cited in English/ was introduced in all Tongan schools of the
178 Archipelago, in order to teach children the important ancient Tongan
871 crafts. Many a girl from Nuku'alofa, for example, whose mother was
already inexperienced in the old handicrafts, has in this way been
made familiar with them, and even in the harbor towns one now con-
stantly hears the sound of the tapa mallets, though even here it was
never completely silenced. For here, and especially on the small
[868] islands, the ancient Tongan crafts have been handed down to this day
from mothers and grandmothers to their children and grandchildren.
285 The "liberation" of commoners also brought about no essential decrease
287 in industriousness after they were no longer obliged to work for the
178 nobles; the authority of the latter passed over to the government,
565 though in milder form, and the Tongan district and town officers
656 /cited in English/ serving in the individual villages--who are subject
to a higher authority--see to it that the Tongan women living within
their jurisdiction produce certain quantities of tapa and mats--for
their own use--during prescribed periods. The majority of women and
[556] girls willingly carry out these orders, though there is no law that
forces them to do so, for mats and tapa are still a standard of
prosperity; no one wants to be regarded as "poor," and women will
therefore work for their good reputation.

285 The question as to why the ancient Tongan treasures are still
287 held in such high regard can scarcely be answered simply by pointing
178